

REMARKS/ARGUMENTS

Applicants have received and carefully reviewed the Office Action of the Examiner mailed January 17, 2007. Claims 1, 3-9, 13-38, 40-46, 49, and 50 remain pending, with claims 13-37 withdrawn from consideration. Claims 1, 38, 49, and 50 have been amended and claims 10-12, 47, and 48 have been canceled. Support for the amendments is found in the specification, claims, and drawings as originally filed. No new matter has been added. Reconsideration and reexamination are respectfully requested.

Claim Objection

Claims 1, 11, 38, and 48 are objected to for an informality. The claims have been amended as suggested by the examiner.

Rejection under 35 U.S.C. § 102(b)

Claims 1, 3-6, 38, and 40-43 are rejected as being anticipated by Mitchell (US 5,809,185). Independent claims 1 and 38 recite sensors having first and second light sources with first and second wavelengths, respectively. Mitchell does not appear to teach such sensors. Mitchell appears to teach a waveguide having a single light source 16. See column 2, lines 47-51 and FIG. 1.

The Examiner asserts that the fluorochrome coating compositions applied to the outer surface of the waveguide of Mitchell constitute a capability of containing a first fluid being the reagent and the sample passed through constitutes permitting a second fluid being the analyte. Applicants respectfully disagree. Mitchell teaches "Fluorochrome coating 20 may be effected by dipping optical fiber 18 in the fluorochrome composition and allowing it to dry." Emphasis added; see column 2, lines 60-62. Applicants submit that the dried fluorochrome coating of Mitchell cannot be seen to anticipate an enclosure capable of containing a first fluid when the sample passing through the optical fiber is considered a second fluid.

Additionally, Mitchell does not appear to provide any suggestion or motivation for modifying his device to include a second light source with a second wavelength, as is recited in the claims. Mitchell thus does not appear to teach each and every element of the independent claims 1 and 38 and the claims dependent thereon. Reconsideration and withdrawal of the rejection are respectfully requested.

Claims 1, 3-9, 38, and 40-46 are rejected as being anticipated by Fein (US 6,016,372). Independent claims 1 and 38 recite sensors having first and second light sources with first and second wavelengths, respectively. Fein does not appear to teach such sensors. Fein appears to teach a waveguide having a single light source 16. See column 6, lines 9-10 and FIG. 1. Additionally, Fein does not appear to provide any suggestion or motivation for modifying his device to include a second light source with a second wavelength, as is recited in the claims. Fein thus does not appear to teach each and every element of the independent claims 1 and 38 and the claims dependent thereon. Reconsideration and withdrawal of the rejection are respectfully requested.

Rejection under 35 U.S.C. § 103(a)

Claims 10-12, 47, 48, and 50 are rejected as being unpatentable over Fein in view of Klainer (US 4,846,548). The Examiner acknowledges that Fein fails to teach a second light source with a second wavelength, but asserts that it would have been obvious to one of ordinary skill in the art to modify Fein to include a second light source of a second wavelength as taught by Klainer in order to provide for enhanced sensitivity in detection of the chemical specie. Applicants respectfully disagree.

Fein appears to teach a waveguide sensor in which sensitivity is enhanced by maximizing the surface area of the waveguide and adjusting the internal volume of the housing and size of the gas discharge opening. See column 11, lines 42-51. Fein also teaches enhancing sensitivity by increasing the ambient pressure. See column 12, lines 25-41. Fein thus appears to teach a waveguide with enhanced sensitivity. Klainer appears to teach a fiber optic sensor in which a solid core is clad with a reactive material. Klainer teaches "The clad can be attached to the core

by either vapor deposition, plating or coating, or by any other known technique." See column 4, lines 43-45. Fein, however, teach a waveguide having a liquid core in which "Sensitivity is enhanced by controlling the pressure differential across the waveguide wall and/or by shaping the waveguide to enlarge the surface area." See abstract. Applicants submit that there is no motivation for one of ordinary skill in the art to modify the teachings of Fein with those of Klainer. Fein specifically describes the disadvantages of solid core optical fiber sensors. See column 1, line 33 through column 2, line 62. Applicants submit that one of ordinary skill in the art, upon reading Fein's description of the disadvantages of the sensors of the type disclosed by Klainer, would have no motivation to combine the teachings of Klainer with Fein. Further, Klainer's only teaching regarding the use of multiple wavelengths appears to be the generic statement that, "Multiple wavelength sources may be used to enhance sensitivity" with respect to a sensor for water involving a sensor having a cobaltous chloride coating on a suitable core. Klainer does not appear to provide any actual teaching of a sensor having multiple wavelength sources, and does not appear to provide any indication of how such a sensor would achieve enhanced sensitivity. Applicants submit that based on this generic proposal of Klainer, one of ordinary skill in the art would not have been motivated to modify the Fein device to include multiple wavelength sources. Reconsideration and withdrawal of the rejection are respectfully requested.

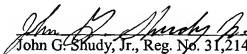
Claim 49 is rejected as being unpatentable over Fein in view of Klainer and further in view of Wong (US 5,444,249). For at least the reasons set forth above, there is no motivation for one if ordinary skill in the art to combine the teachings of Fein and Klainer. Wong does not provide what Fein and Klainer lack. Reconsideration and withdrawal of the rejection are respectfully requested.

Appl. No. 10/727,834
Reply to Office action dated January 17, 2007

Reconsideration and reexamination are respectfully requested. It is submitted that, in light of the above remarks, all pending claims are now in condition for allowance. If a telephone interview would be of assistance, please contact the undersigned attorney at 612-677-9050.

Respectfully submitted,

Dated: 04-17-07


John G. Shudy, Jr., Reg. No. 31,214
CROMPTON, SEAGER & TUFTE, LLC
1221 Nicollet Avenue, Suite 800
Minneapolis, Minnesota 55403-2420
Telephone: (612) 677-9050
Facsimile: (612) 359-9349